

Supplementary Table and Figure legends

Supplementary Table 1.

Performance Metrics of the XGBoost Model on Training, Validation, and Test Sets

Metric	Training Set	Validation Set	Test Set
AUC	0.950	0.893	0.890
95% CI	[0.940-0.960]	[0.860-0.925]	[0.868-0.913]
Cutoff	0.480	0.480	0.465
Accuracy	0.880	0.821	0.809
Sensitivity	0.875	0.812	0.744
Specificity	0.886	0.845	0.890
PPV	0.883	0.822	0.809
NPV	0.878	0.821	0.810
F1 Score	0.879	0.817	0.776

Note: Acc = Accuracy; Sens = Sensitivity; Spec = Specificity; PPV = Positive Predictive Value; NPV = Negative Predictive Value.

Supplementary Table 2.**XGBoost Model External Validation**

Model	AUC	95% CI	cutoff	Acc	Sens	Spec	PPV	NPV	F1 Score	Kappa
XGBoost	0.91	[0.889- 0.931]	0.465	0.77	0.875	0.811	0.643	0.925	0.741	0.549

Note: Acc = Accuracy; Sens = Sensitivity; Spec = Specificity; PPV = Positive Predictive Value; NPV = Negative Predictive Value.